

May 5, 2005

Mr. Christopher M. Crane  
President and Chief Nuclear Officer  
Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3  
FIRE PROTECTION TRIENNIAL BASELINE INSPECTION  
INSPECTION REPORT 05000237/2005002(DRS); 05000249/2005002(DRS)

Dear Mr. Crane:

On April 1, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Dresden Nuclear Power Station, Units 2 and 3. The enclosed report documents the inspection findings which were discussed on April 1, 2005, at the Dresden Station and during a telephone conference call on April 22, 2005, with Mr. D. Bost and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, one NRC-identified finding of very low safety significance, which involved a violation of NRC requirements, was identified. However, because the violation was of very low safety significance and because the issue was entered into the licensee's corrective action program, the NRC is treating this finding as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of a Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Dresden Nuclear Power facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's

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Sincerely,

*/RA/*

Julio F. Lara, Chief  
Engineering Branch 3  
Division of Reactor Safety

Docket Nos. 50-237; 50-249  
License Nos. DPR-19; DPR-25

Enclosure: Inspection Report 05000237/2005002(DRS); 05000249/2005002(DRS)  
w/Attachment: Supplemental Information

cc w/encl: Site Vice President - Dresden Nuclear Power Station  
Dresden Nuclear Power Station Plant Manager  
Regulatory Assurance Manager - Dresden  
Chief Operating Officer  
Senior Vice President - Nuclear Services  
Senior Vice President - Mid-West Regional  
Operating Group  
Vice President - Mid-West Operations Support  
Vice President - Licensing and Regulatory Affairs  
Director Licensing - Mid-West Regional  
Operating Group  
Manager Licensing - Dresden and Quad Cities  
Senior Counsel, Nuclear, Mid-West Regional  
Operating Group  
Document Control Desk - Licensing  
Assistant Attorney General  
Illinois Department of Nuclear Safety  
State Liaison Officer  
Chairman, Illinois Commerce Commission

C. Crane

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cc w/encl: Site Vice President - Dresden Nuclear Power Station  
Dresden Nuclear Power Station Plant Manager  
Regulatory Assurance Manager - Dresden  
Chief Operating Officer  
Senior Vice President - Nuclear Services  
Senior Vice President - Mid-West Regional  
Operating Group  
Vice President - Mid-West Operations Support  
Vice President - Licensing and Regulatory Affairs  
Director Licensing - Mid-West Regional  
Operating Group  
Manager Licensing - Dresden and Quad Cities  
Senior Counsel, Nuclear, Mid-West Regional  
Operating Group  
Document Control Desk - Licensing  
Assistant Attorney General  
Illinois Department of Nuclear Safety  
State Liaison Officer  
Chairman, Illinois Commerce Commission

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-237; 50-249  
License Nos: DPR-19; DPR-25

Report No: 05000237/2005002(DRS); 05000249/2005002(DRS)

Licensee: Exelon Generation Company, LLC

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: 6500 North Dresden Road  
Morris, IL 60450

Dates: March 14 through April 1, 2005

Inspectors: C. Chyu, Reactor Inspector  
G. Hausman, Senior Reactor Inspector, Lead  
A. Klett, Reactor Inspector  
R. Langstaff, Senior Reactor Inspector

Approved by: J. Lara, Chief  
Engineering Branch 3  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000237/2005002(DRS); 05000249/2005002(DRS); 03/14/2005 - 04/01/2005; Dresden Nuclear Power Station, Units 2 and 3; Fire Protection Triennial Baseline Inspection.

This report covers an announced triennial fire protection baseline inspection. The inspection was conducted by Region III inspectors. One Green finding associated with a Non-Cited Violation was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### **A. Inspector-Identified and Self-Revealed Findings**

#### **Cornerstone: Initiating Events**

No findings of significance were identified.

#### **Cornerstone: Mitigating Systems**

- Green. A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 50, Appendix B requirements. The licensee failed to specify the correct number of turns in a hot shutdown procedure for partially opening a valve relied upon to mitigate a fire. The incorrect number of turns specified in the procedure could have caused a significant delay in performance of safe shutdown actions in the event of a fire. Once identified, the licensee entered the finding into their corrective action program to revise the affected procedures.

This finding was more than minor because the procedural error could have caused a significant delay in the performance of safe shutdown actions in the event of a fire. The issue was of very low safety significance because the licensee's analysis showed that sufficient margin remained for the performance of the safe shutdown actions. The finding was a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, which required procedures affecting quality to be of a type appropriate to the circumstances. (Section 1R05.5b)

### **B. Licensee-Identified Violations**

No findings of significance were identified.

## REPORT DETAILS

### Summary of Plant Status

Unit 2 operated at or near full power at the start of the inspection. On March 24, 2005, a Unit 2 reactor scram occurred. Unit 2 was returned to full power on March 27, 2005.

Unit 3 operated at or near full power throughout the inspection period.

### **1. REACTOR SAFETY**

#### **Cornerstones: Initiating Events and Mitigating Systems**

#### 1R05 Fire Protection (71111.05)

The purpose of this inspection was to review the Dresden Nuclear Power Station's (DNPSs) Fire Protection Program (FPP) for selected risk-significant fire areas. Emphasis was placed on determining that the post-fire safe shutdown capability and the fire protection features were maintained free of fire damage to ensure that at least one post-fire safe shutdown success path was available. The inspection was performed in accordance with the Nuclear Regulatory Commission's (NRCs) regulatory oversight process using a risk-informed approach for selecting the fire areas and attributes to be inspected. The inspectors used the DNPSs Individual Plant Examination of External Events (IPEEE) to choose several risk-significant areas for detailed inspection and review. The fire zones chosen for review during this inspection were:

#### **Selected Fire Areas and Zones**

<b><u>Fire Area</u></b>	<b><u>Fire Zones</u></b>	<b><u>Description</u></b>
RB2-II	1.1.2.3	Unit 2 Second Floor Reactor Building
TB-III	8.2.5.E	Unit 3 West Corridor and Trackway
TB-III	8.2.6.E	Unit 3 Mezzanine Floor

For each of these fire zones, the inspection focused on the fire protection features, the systems and equipment necessary to achieve and maintain safe shutdown conditions, determination of licensee commitments, and changes to the FPP.

#### **.1 Systems Required to Achieve and Maintain Post-Fire Safe Shutdown**

Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix R, Section III.G.1, required the licensee to provide fire protection features that were capable of limiting fire damage to structures, systems, and components (SSCs) important to safe shutdown. The SSCs that were necessary to achieve and maintain post-fire safe shutdown were required to be protected by fire protection features that were capable of limiting fire damage to the SSCs so that:

- One train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) was free of fire damage; and

- Systems necessary to achieve and maintain cold shutdown from either the control room or emergency control station(s) can be repaired within 72-hours.

Specific design features for ensuring this capability were specified by 10 CFR Part 50, Appendix R, Section III.G.2.

a. Inspection Scope

The inspectors reviewed the plant systems required to achieve and maintain post-fire safe shutdown to determine if the licensee had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions for each fire area selected for review in accordance with the criteria discussed above. Specifically, the review was performed to determine the adequacy of the systems selected for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring, and support system functions. This review included the fire protection safe shutdown analysis.

The inspectors also reviewed the operators' ability to perform the necessary manual actions for achieving safe shutdown by reviewing procedures, the accessibility of safe shutdown equipment, and the available time for performing the actions.

The inspectors reviewed the DNPSs Updated Safety Analysis Report and the licensee's engineering and/or licensing justifications (e.g., NRC guidance documents, license amendments, technical specifications, safety evaluation reports, exemptions, and deviations) to determine the licensing basis.

b. Findings

No findings of significance were identified.

2. Fire Protection of Safe Shutdown Capability

Title 10 CFR Part 50, Appendix R, Section III.G.2, required separation of cables and equipment and associated circuits of redundant trains by a fire barrier having a 3-hour rating. Title 10 CFR Part 50, Appendix R, Section III.G.3, required that, if the guidelines cannot be met, then alternative or dedicated shutdown capability and its associated circuits, independent of cables, systems or components in the area, room, or zone under consideration should be provided.

a. Inspection Scope

For each of the selected fire zones, the inspectors reviewed the licensee's Safe Shutdown Analysis (SSA) to ensure that at least one post-fire safe shutdown success path was available in the event of a fire in accordance with the criteria discussed above. This included a review of manual actions required to achieve and maintain hot shutdown conditions and to make the necessary repairs to reach cold shutdown within 72-hours. The inspectors also reviewed procedures to determine whether or not adequate direction was provided to operators to perform these manual actions. Factors such as



timing, access to the equipment, and the availability of procedures, were considered in the review.

The inspectors also evaluated the adequacy of fire suppression and detection systems, fire area barriers, penetration seals, and fire doors to ensure that at least one train of safe shutdown equipment was free of fire damage. To accomplish this, the inspectors observed the material condition and configuration of the installed fire detection and suppression systems, fire barriers, construction details, and supporting fire tests for the installed fire barriers. In addition, the inspectors reviewed licensee documentation, such as deviations, detector placement drawings, fire hose station drawings, carbon dioxide pre-operational test reports, smoke removal plans, Fire Hazard Analysis (FHA) reports, SSA, and National Fire Protection Association (NFPA) codes to verify that the fire barrier installations met license commitments.

b. Findings

No findings of significance were identified.

.3 Post-Fire Safe Shutdown Circuit Analysis

Title 10 CFR Part 50, Appendix R, Section III.G.1, required that SSCs important to safe shutdown be provided with fire protection features capable of limiting fire damage to ensure that one train of systems necessary to achieve and maintain hot shutdown conditions remained free of fire damage. Options for providing this level of fire protection were delineated in 10 CFR Part 50, Appendix R, Section III.G.2. Where the protection of systems whose function was required for hot shutdown did not satisfy 10 CFR Part 50, Appendix R, Section III.G.2, an alternative or dedicated shutdown capability and its associated circuits, were required to be provided that was independent of the cables, systems, and components in the area. For such areas, 10 CFR Part 50, Appendix R, Section III.L.3, specifically required the alternative or dedicated shutdown capability to be physically and electrically independent of the specific fire areas and capable of accommodating post-fire conditions where offsite power was available and where offsite power was not available for 72 hours.

a. Inspection Scope

The inspectors performed a review of the licensee's SSA and Safe Shutdown Equipment List (SSEL) to determine whether the licensee had appropriately identified and analyzed the safety related and non-safety related cables associated with safe shutdown equipment located in the selected plant fire zones in accordance with the criteria discussed above. The inspectors' review included the assessment of the licensee's electrical systems and electrical circuit analyses.

The inspectors evaluated a sample of safety and non-safety related cables for equipment in the selected fire zones to determine if the design requirements of Section III.G of Appendix R to 10 CFR Part 50 were being met. This included determining that hot shorts, open circuits, or shorts to ground would not prevent implementation of safe shutdown.

b. Findings

Introduction: The inspectors identified that the licensee evaluated their post-fire safe shutdown circuit analysis using a method that was not consistent with the methodology described in the NRC Regulatory Issue Summary (RIS) 2004-003, Revision 1, "Risk-Informed Approach for Post-Fire Safe-Shutdown Circuit Inspections," issued on December 29, 2004. The licensee's position was that the RIS guidance was outside DNPSs licensing basis.

Description: During the inspectors' review of the licensee's FPP, specifically the review of Issue Report (IR) 00311499, "Potential for Multiple Spurious Actuations During Fire," dated March 11, 2005, the licensee stated that the RIS guidance exceeded the Dresden licensing basis, which only required DNPSs consideration of any and all spurious signals taken one at a time. The licensee stated that the RIS 2004-003, Revision 1, guidance and/or methodology was not within the DNPSs licensing basis.

Based on the licensee's position, as stated in the IR, the inspectors requested the licensee to provide a basis supporting their position with respect to the RIS. On March 24, 2005, the licensee provided a position paper and supporting documentation. The position paper and supporting documentation did not specifically state that the NRC approved DNPSs methodology for analyzing fire induced spurious operations based on a single spurious operation.

Further discussions between the licensee and the NRC on April 13, 2005, did not provide new, additional information. As a result, the NRC concluded that a thorough review of DNPSs licensing basis was necessary and additional inspection effort was warranted to evaluate the licensee's FPP. Therefore, pending review and completion of additional inspection activities concerning the DNPSs FPP, this issue is an Unresolved Item (URI) (URI 05000237/2005002-01(DRS); 05000249/2005002-01(DRS)).

.4 Alternative Shutdown Capability

Title 10, Part 50, Appendix R, Section III.G.1, required the licensee to provide fire protection features that were capable of limiting fire damage so that one train of systems necessary to achieve and maintain hot shutdown conditions remained free of fire damage. Specific design features for ensuring this capability were provided in 10 CFR Part 50, Appendix R, Section III.G.2. Where compliance with the separation criteria of 10 CFR Part 50, Appendix R, Section III.G.2, could not be met, an alternative or dedicated shutdown capability be provided that was independent of the specific fire area under consideration. Additionally, alternative or dedicated shutdown capability must be able to achieve and maintain hot standby conditions and achieve cold shutdown conditions within 72-hours and maintain cold shutdown conditions thereafter. During the post-fire safe shutdown, the reactor coolant process variables must remain within those predicted for a loss of normal alternating current power, and the fission product boundary integrity must not be affected (i.e., no fuel clad damage, rupture of any primary coolant boundary, or rupture of the containment boundary).

a. Inspection Scope

The inspectors reviewed the licensee's systems required to achieve safe shutdown to determine if the licensee had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions in accordance with the criteria discussed above. The inspectors also focused on the adequacy of the systems to perform reactor pressure control, reactivity control, reactor coolant makeup, decay heat removal, process monitoring, and support system functions.

b. Findings

No findings of significance were identified.

.5 Operational Implementation of Alternate Shutdown Capability

The DNPSs FPP described the means by which safe shutdown could be achieved to meet the requirements of 10 CFR Part 50, Appendix R, Sections III.G.3 and III.L. The DNPSs safe shutdown analysis identified the minimum number of components and plant systems necessary for achieving Appendix R safe shutdown performance goals.

a. Inspection Scope

The inspectors performed a review of the licensee's operating procedures, which augmented the post-fire safe shutdown procedures to determine if the licensee complied with the criteria discussed above. The review focused on ensuring that all required functions for post-fire safe shutdown and the corresponding equipment necessary to perform those functions were included in the procedures. The review also looked at operator training, as well as consistency between the operations shutdown procedures and any associated administrative controls.

b. Findings

Introduction: The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, having very low safety significance (Green) for failing to specify the correct number of turns in a hot shutdown procedure for partially opening a valve relied upon to mitigate a fire. The incorrect number of turns specified in the procedure could have caused a significant delay in performance of safe shutdown actions in the event of a fire.

Description: Safe shutdown actions for a significant fire in Fire Area RB2-1 (Unit 2 Reactor Building) were outlined in DSSP 0100-B1, "Hot Shutdown Procedure - Path B1." The procedure's Attachment E, "U2 EA [equipment attendant] Actions," specified local manual actions that initiated cooling using the isolation condenser. Step 1.c of DSSP 0100-B1 (Revision 26), Attachment E, directed operators to manually open valve MO 2-1301-2 by engaging the handwheel and cranking the valve to its backseat or until completing 553 turns. Valve MO 2-1301-2 was normally an open valve. However, the licensee determined that, if the valve had spuriously closed in the event of a fire, the valve would have to be manually opened at least halfway to provide adequate steam flow to the isolation condenser. When the inspectors questioned the licensee on how

long it would take to perform this procedure step, the licensee's engineering personnel determined that the valve only required 190 turns to open the valve halfway for an estimated time of 10 minutes. However, given the procedural guidance to open the valve by cranking it to its backseat or until completing 553 turns, an operator would have fully opened the valve. Licensee engineering personnel estimated that it would take 18.5 minutes to fully open the valve manually. Licensee operations personnel estimated the amount of time it would take to complete the actions (including fully opening valve MO 2-1301-2) to initiate isolation condenser cooling specified by DSSP 0100-B1, Attachment E, to be 31 minutes. The estimates were based on a combination of walkdowns of portions of the procedure and judgement. The walkdowns did account for taking an alternate route so as to avoid entering the affected fire area. The inspectors noted that the calculated evaluation of fire scenarios (i.e., Calculation GE-NE-A22-00103-56-01-D, "Dresden and Quad Cities Extended Power Uprate Evaluation, Task T0611: Appendix R Fire Protection (Dresden Station)," Revision 1) concluded that, under worst case conditions, operations personnel would only have 32 minutes to initiate isolation condenser cooling. The inspectors concluded that the procedure error could result in a significant delay in performance of safe shutdown actions in the event of a fire. The delay was significant because it could result in a significant reduction of margin from 9.5 minutes to 1 minute for performing operator actions.

Analysis: The inspectors determined that failing to specify the correct number of turns to manually open valve MO 2-1301-2 halfway was a performance deficiency warranting a significance determination evaluation. The inspectors concluded that the finding was greater than minor in accordance with Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Disposition Screening," issued on June 20, 2003. The finding involved the attribute of protection against external factors (fire) in that the procedural error resulted in a significant delay for performing safe shutdown manual actions in the event of a fire.

The inspectors completed a significance determination of this finding using IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," dated December 1, 2004, and IMC 0609, Appendix F, "Fire Protection Significance Determination Process," dated February 28, 2005. Based on review of IMC 0609, Appendix F, the inspectors concluded that the finding affected the post-fire plant response procedures element of the post-fire safe-shutdown finding category. However, since the licensee's analysis showed that sufficient margin remained for the performance of the safe shutdown actions, the inspectors determined that the finding was of very low safety significance (Green).

Enforcement: The licensee's Quality Assurance Program (QAP) is the method for complying with the provisions of 10 CFR Part 50, Appendix B requirements. The QAP is defined in NO-AA-10, "Quality Assurance Topical Report [QATR]," Revision 72, and its implementing procedures. The licensee's FPP and supporting operational activities are defined in the QATR's Appendix A and F as meeting augmented quality requirements. The QATR stated that the provisions of 10 CFR Part 50, Appendix B requirements shall be used for augmented quality requirements.

Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances. Procedure DSSP 0100-B1 was a procedure for activities affecting quality in that the procedure directed operators to manipulate safety-related equipment such as valve MO 2-1301-2. Contrary to the above, as of April 1, 2005, DSSP 0100-B1, Revision 26, was not a procedure of a type appropriate to the circumstances in that Step 1.c of DSSP 0100-B1, Attachment E, specified the incorrect number of turns for manually opening valve MO 2-1301-2 halfway. The incorrect number of turns specified by the procedure had the potential to cause an operator to fully open valve MO 2-1301-2, thereby, significantly delaying performance of safe shutdown actions used to initiate isolation condenser cooling in the event of a fire. The licensee's engineering staff entered this finding into the licensee's corrective action program as Issue Report (IR) 00315437 on March 21, 2005, to revise the affected procedures. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program, this violation is being treated as a NCV, consistent with Section VI.A of the NRC Enforcement Policy (NCV 05000237/2005002-02(DRS); 05000249/2005002-02(DRS)).

.6 Communications

Title 10 CFR Part 50, Appendix R, Section III.H, required that a portable communications system be provided for use by the fire brigade and other operations personnel required to achieve safe plant shutdown. This system should not interfere with the communications capabilities of other plant personnel. Fixed repeaters installed to permit use of portable radio communication units should be protected from exposure to fire damage.

a. Inspection Scope

The inspectors reviewed the adequacy of the communication systems to support plant personnel in the performance of alternative safe shutdown functions and fire brigade duties to determine compliance. The inspectors conducted a review to determine that adequate communications were available to support safe shutdown implementation.

b. Findings

No findings of significance were identified.

.7 Emergency Lighting

Title 10 CFR Part 50, Appendix R, Section III.J., required that fixed self-contained lighting consisting of fluorescent or sealed-beam units with individual eight-hour minimum battery power supplies should be provided in areas that must be manned for safe shutdown and for access and egress routes to and from all fire zones.

a. Inspection Scope

The inspectors performed a walkdown of the fire zones and the access/egress routes to determine that adequate emergency lighting existed in accordance with the criteria discussed above.

b. Findings

No findings of significance were identified.

.8 Cold Shutdown Repairs

Title 10 CFR Part 50, Appendix R, Section III.L.5, required that equipment and systems comprising the means to achieve and maintain cold shutdown conditions should not be damaged by fire; or the fire damage to such equipment and systems should be limited so that the systems can be made operable and cold shutdown achieved within 72 hours. Materials for such repairs shall be readily available onsite, and procedures shall be in effect to implement such repairs.

a. Inspection Scope

The inspectors reviewed the licensee's procedures to determine if any repairs were required to achieve cold shutdown. The inspectors determined that the licensee did require repair of some equipment to reach cold shutdown based on the safe shutdown methods used. The inspectors reviewed the procedures for adequacy.

b. Findings

No findings of significance were identified.

.9 Fire Barriers and Fire Zone/Room Penetration Seals

Title 10 CFR Part 50, Appendix R, Section III.M, required that penetration seal designs be qualified by tests that are comparable to tests used to rate fire barriers.

a. Inspection Scope

The inspectors performed visual inspections of selected three-hour rated barriers to ensure that the barrier installations were consistent with the criteria discussed above. In addition, the inspectors reviewed the fire loading for selected areas to ensure that existing barriers would not be challenged by a potential fire.

b. Findings

No findings of significance were identified.

.10 Fire Protection Systems, Features and Equipment

a. Inspection Scope

The inspectors reviewed the material condition, operations lineup, operational effectiveness, and design of fire detection systems, fire suppression systems, manual fire fighting equipment, fire brigade capability, and passive fire protection features. The inspectors reviewed deviations, detector placement drawings, fire hose station drawings, and fire hazard analysis reports to ensure that selected fire detection systems, sprinkler systems, portable fire extinguishers, and hose stations were installed in accordance with their design, and that their design was adequate given the current equipment layout and plant configuration.

b. Findings

No findings of significance were identified.

.11 Compensatory Measures

a. Inspection Scope

The inspectors conducted a review to determine that adequate compensatory measures were put in place by the licensee for out-of-service, degraded or inoperable fire protection and post-fire safe shutdown equipment, systems, or features. The inspectors also reviewed the adequacy of short term compensatory measures to compensate for a degraded function or feature until appropriate corrective actions were taken.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

The inspectors reviewed the corrective action program procedures and samples of corrective action documents to assess whether or not the licensee was identifying issues related to fire protection at an appropriate threshold and entering them in the corrective action program. The inspectors reviewed selected samples of condition reports, work orders, design packages, and fire protection system non-conformance documents.

b. Findings

No findings of significance were identified.

#### 4OA6 Meetings

##### .1 Exit Meeting

The inspectors presented the inspection results to Mr. Bost and other members of licensee management at the conclusion of the inspection on April 1, 2005. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

A telephone conference call was made on April 22, 2005, with other members of licensee management to identify the URI discussed in Section 1R05.3b.

##### .2 Interim Exit Meetings

No interim exits were conducted.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee

C. Barajas, Shift Operations Superintendent  
J. Bashor, Work Management Director  
P. Bembnister, Fire Protection System Engineer  
G. Bockholdt, Maintenance Director  
D. Bost, Site Vice President  
M. Dillon, Fire Protection Contractor  
R. Gadbois, Operations Director  
D. Galanis, Design Engineering Manager  
J. Griffin, NRC Coordinator  
D. Gullott, Corporate Licensing  
M. Kanavos, Site Engineering Director  
A. Khanifar, Nuclear Oversight Manager  
M. Kluge, Design Engineering  
D. Knox, Design Engineering  
A. Mauro, Operation/Fire Marshall  
J. Ondish, Design Engineering  
C. Pragman, Corporate Fire Protection  
R. Ruffin, Operations  
B. Rybak, Lead Licensing Engineer  
P. Salas, Regulatory Assurance Manager  
P. Simpson, Corporate Licensing Manager  
J. Sipek, Engineering Programs Manager  
C. Symonds, Training Director  
D. Wozniak, Plant Manager

#### Nuclear Regulatory Commission

J. Lara, Engineering Branch 3 Chief  
C. Phillips, Senior Resident Inspector  
D. Smith, Senior Resident Inspector

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

05000237/2005002-01(DRS); 05000249/2005002-01(DRS)	URI	Post-Fire Safe-Shutdown Circuit Analysis Not Consistent with RIS 2004-003 (Section 1R05.3b)
05000237/2005002-02(DRS); 05000249/2005002-02(DRS)	NCV	Safe Shutdown Procedure Failed to Specify Correct Number of Turns for Opening Valve (Section 1R05.5b)

### Closed

05000237/2005002-02(DRS); 05000249/2005002-02(DRS)	NCV	Safe Shutdown Procedure Failed to Specify Correct Number of Turns for Opening Valve (Section 1R05.5b)
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### Discussed

None.

## LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

### CALCULATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
DRE 96-0149	Breaker Settings for Bus 28 and 29	3
DRE 97-0061	Dresden Station Fire Main Equivalent Lengths	3
DRE 97-0105	Fire Loading Calculation Sheet	5

### CORRECTIVE ACTION PROGRAM DOCUMENTS ISSUED DURING INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
00311476	Controlled Permits Lost	March 11, 2005
00311485	Discrepancies Identified in DSSP CSD Procedures	March 11, 2005
00311486	Potential Enhancement Identified for Fire Pre-Plans	March 11, 2005
00311493	ECCS Keep Fill System Not Included App R Analysis	March 11, 2005
00311499	Potential for Multiple Spurious Actuations During Fire	March 11, 2005
00313561	Discrepancies in FP SSD Report Table 7.3-2	March 16, 2005
00313562	Sprinkler Head Interference Evaluation	March 16, 2005
00313940	Tarp Not Removed per DMP 5700-05 Requirements	March 17, 2005
00314491	DSSP Ladder Reference Basis Unclear	March 18, 2005
00315437	DSSP Identifies Incorrect # of Turns to Open Valve	March 21, 2005
00318259	Incorrect Equipment Designation on Drawing 12E-2051	March 29, 2005
00318261	Dwg 12E-3901P Shows Unnecessary Information	March 29, 2005
00318887	Evaluate Iso Cond Floor Fire Extinguisher Placement	March 30, 2005
00319654	NRC Questions Hourly Fire Watch Practices	March 31, 2005

### CORRECTIVE ACTION PROGRAM DOCUMENTS (CRs) ISSUED PRIOR TO INSPECTION

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
00201611	NRC Concerns with FP System Impairment Control	February 12, 2004
00280050	Fire Hose Reel F-126 Found Pressurized	December 9, 2004
00283306	Smoke Detector Did Not Respond to Testing	December 20, 2004
00285801	Can Not Find Documentation for Fire Barrier Pen	December 27, 2004
00286640	Possible Fire System Restriction	January 9, 2005
00288055	2/3-4101 Battery Cells 8, 14, 16, and 31 Low Voltage	January 6, 2005
00290049	3 WO Drums Found with No TC Permit	January 14, 2005
00292090	CO <sub>2</sub> Extinguishers in Place of Halon Extinguishers	January 24, 2005
00292533	AEER Halon Main Discharge Cylinder - Low Pressure	January 24, 2005
00298166	Main FD Breakers Not Properly Sealed	February 7, 2005
00299076	Emergency Light 343 Lamp Head Mis-Positioned	February 9, 2005
00300164	Combustible Loading Calculations Discrepancies	February 14, 2005

**CORRECTIVE ACTION PROGRAM DOCUMENTS (CRs) ISSUED PRIOR TO INSPECTION**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
00301557	EPU App R Analysis Did Not Include GESIL 636 Effect	February 17, 2005
00302038	FPR Documentation Issues	February 18, 2005
00309314	Bus 31 Main FD Bkr Cooling Fan Bkr Fire	March 7, 2005

**DRAWINGS**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
F-1	Legend and Description	D
F-2-1	Detection and Suppression RX Bldg EI 476'-6"	H
F-2-2	HSD-Iso Cond Method RX Bldg EI 476'-6"	C
F-2-4	CSD SDC RX Bldg EI 476'-6"	B
F-2-5	CSD Div II LPCI RX Bldg EI 476'-6"	B
F-3-1	Detection and Suppression RX Bldg EI 517'-6"	H
F-3-2	HSD-Iso Cond Method RX Bldg EI 517'-6"	D
F-3-4	CSD SDC RX Bldg EI 517'-6"	C
F-3-5	CSD Div II LPCI RX Bldg EI 517'-6"	C
F-4-1	Detection and Suppression RX Bldg EI 545'-6"	F
F-4-2	HSD-Iso Cond Method RX Bldg EI 545'-6"	B
F-4-4	CSD SDC RX Bldg EI 545'-6"	A
F-4-5	CSD Div II LPCI RX Bldg EI 545'-6"	A
F-5-1	Detection and Suppression RX Bldg EI 570'-0"	H
F-5-2	HSD-Iso Cond Method RX Bldg EI 570'-0"	B
F-5-4	CSD SDC RX Bldg EI 570'-0"	B
F-5-5	CSD Div II LPCI RX Bldg EI 570'-0"	B
F-6-1	Detection and Suppression RX Bldg EI 589'-0"	F
B-204	RX Bldg Framing Plan EI 570'-0" South Area	AA
B-205	RX Bldg Framing Plan EI 570'-0" North Area	AB
F-6-2	HSD-Iso Cond Method RX Bldg EI 589'-0"	B
F-7-1	Detection and Suppression RX Bldg EI 613'-0"	C
F-8-1, Sht 1	Detection and Suppression CR and Misc Turb Bldg Floor	L
F-8-1, Sht 2	Detection and Suppression CR Floor	A
F-8-2, Sht 1	HSD-Iso Cond Method CR and Misc	C
F-8-2, Sht 2	HSD-Iso Cond Method CR and Misc	B
F-8-4, Sht 1	CSD SDC CR EI 534'-0" and Main EI 561'-6"	A
F-8-4, Sht 2	CSD SDC AEER EI 517'-6" and Battery Rm EI 549'-0"	B
F-8-5, Sht 1	CSD Div II LPCI CR EI 534'-0" and Main EI 561'-6"	A
F-8-5, Sht 2	CSD Div II LPCI AEER EI 517'-6" and Batt Rm EI 549'-0"	B
F-9-1	Detection and Suppression Turb Bldg Basement Floor	C
F-9-2	HSD-Iso Cond Method Turb Bldg Basement Floor	A
F-9-4	CSD SDC Turb Bldg Basement Floor	A
F-9-5	CSD Div II LPCI Turb Bldg Basement Floor	A
F-10-1	Detection and Suppression Turb Bldg Grd Floor	F

**DRAWINGS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
F-10-2	HSD-Iso Cond Method Turb Bldg Grd Floor	C
F-10-4	CSD SDC Turb Bldg Grd Floor	B
F-11-1	Detection and Suppression Turb Bldg Grd Floor	G
F-11-2	HSD-Iso Cond Method Turb Bldg Grd Floor	C
F-11-4	CSD SDC Turb Bldg Grd Floor	B
F-11-5	CSD Div II LPCI Turb Bldg Grd Floor	B
F-13-1	Detection and Suppression Turb Bldg Mezz Floor	F
F-13-2	HSD-Iso Cond Method Turb Bldg Mezz Floor	B
F-13-4	CSD SDC Turb Bldg Mezz Floor	B
F-13-5	CSD Div II LPCI Turb Bldg Mezz Floor	B
F-14-1	Detection and Suppression Turb Bldg Mezz Floor	F
F-14-2	HSD-Iso Cond Method Turb Bldg Mezz Floor	B
F-14-4	CSD SDC Turb Bldg Mezz Floor	B
F-14-5	CSD Div II LPCI Turb Bldg Mezz Floor	B
F-18-2	HSD-Iso Cond Method Crib House	A
F-18-4	CSD SDC Crib House	A
F-202-6	Lighting Emergency Battery Units RX Bldg EI 545'-6"	E
F-390	FS System RX FD Pumps/Turb Bearing Lift Pumps	G
M-11	P and ID Index	V
M-11, Sheet 2	Piping and Instr Symbols	K
M-21	Diagram of Turb Bldg Cooling Water Piping	MG
M-22	Diagram of Pen Piping	DK
M-26, Sheet 2	Diagram of Nuclear Boiler and RX Recirculation Piping	KA
M-28	Diagram of Iso Cond Piping	LK
M-29, Sheet 1	Diagram of LPCI Piping	CE
M-29, Sheet 2	Diagram of LPCI Piping	AY
M-32	Diagram of SD RX Cooling Piping	BA
M-34, Sheet 1	Diagram of CRD Hydraulic Piping	AF
M-35, Sheet 1	Diagram of Demineralized Water System Piping	DN
M-41, Sheet 1	Diagram of Turb and Diesel Oil Piping	MT
M-41, Sheet 2	Diagram of Turb and Diesel Oil Piping	AA
M-51	Diagram of High Pressure Coolant Injection Piping	CH
M-354, Sheet 2	Diagram of Turb Bldg Cooling Water Piping	BB
M-355	Diagram of Pen Piping	RM
M-357, Sheet 2	Diagram of Nuclear Boiler and RX Recirculating Piping	BK
M-359	Diagram of Iso Cond Piping	BF
M-360, Sheet 1	Diagram of LPCI System	VK
M-360, Sheet 2	Diagram of LPCI System	AU
M-363	Diagram of SD RX Cooling Piping	BA
M-374	Diagram of High Pressure Coolant Injection Piping	CL
M-365, Sheet 1	Diagram of CRD Hydraulic Piping	AC
M-518, Sheet 2	D/G Fuel Oil System	D
M-974	Diagram of DG Room Ventilation	H
M-1297	Diagram of DG and Battery Room Bldg HVAC	C

**DRAWINGS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
M-4203	Flow Diagram Iso Cond Make Up System	D
12E-2049	C/R and F/Ss Turb Bldg, RX Bldg and Crib House	V
12E-2050	C/R and F/Ss Turb, RX Bldg Grd Floor	AP
12E-2051	C/R and F/Ss Turb and RX Bldg Mezz Floor	AL
12E-2051A	C/R and F/Ss Mezz Turb and RX Bldg	D
12E-2052	C/R and F/Ss Electrical and Computer Rm EI 517'-6"	AN
12E-2053	C/R and F/Ss CR Area EI 534'-0" and 549'-0"	W
12E-2054	Front Elevation and Mounting Detail 4160V/480V SWGR	CN
12E-2079F	FP System RX Bldg EI 545'-6" North Area	E
12E-2080H	FP System RX Bldg EI 545'-6" South Area	E
12E-2301, Sheet 1	Single Line Diagram	AL
12E-2301, Sheet 2	Single Line Diagram	AG
12E-2301, Sheet 3	Single Line Diagram	AS
12E-2301, Sheet 4	Single Line Diagram	B
12E-2302A	Station K/D 4160V and 480V SWGRs 480V MCCs	V
12E-2303, Sheet 2	K/D 4160V SWGRs 23 and 24	V
12E-2303, Sheet 3	K/D 4160V SWGRs 23 and 24	B
12E-2304	K/D 4160V SWGRs 23-1 and 24-1	V
12E-2321	K/D 250Vdc MCCs	AM
12E-2322, Sheet 1	K/D Turb Bldg 125Vdc Main Bus 2A-1 Dist Panel	AN
12E-2322, Sheet 2	K/D Turb Bldg 125Vdc Buses 2A-1 and 2A-2 Dist Panels	AL
12E-2322, Sheet 3	K/D RX Bldg 125Vdc Main Bus 2 Dist Panel	AE
12E-2322A	K/D Turb Bldg 125Vdc Reserve Bus Dist Panel	N
12E-2322B	Overall K/D 125Vdc Dist Centers	K
12E-2328	Single Line Diagram Emergency Power System	M
12E-2330	Synchronizing Diagram	U
12E-2342	S/D 4160V Bus 23 Main and Reserve FD G.C.B.'s	AD
12E-2342A	S/D 4160V SWGR Bus 23 Alternate FD	A
12E-2344, Sheet 1	S/D Control 4160V Bus 23-1 FD Bkrs	W
12E-2344, Sheet 2	S/D 4160V Bus 23-1 Main FD Bkr	Y
12E-2345, Sheet 1	S/D 4160V Bus 23-1 4kV SWGR Bus 40 FD Bkr	AW
12E-2345, Sheet 2	S/D 4160V Bus 23-1 4kV SWGR Bus 40 FD Bkr	AS
12E-2345, Sheet 3	S/D 4160V Bus 23-1 Undervoltage Relay	AL
12E-2345, Sheet 4	S/D 4160V Bus 23-1 33-1 Tie Bkr	D
12E-2351, Sheet 3	S/D 4160V DG 2/3 Auxiliaries and Start Relays	AF
12E-2391	S/D SW Pumps and Strainers	L
12E-2416	S/D CRD Hydraulic Pumps and Valves	W
12E-2416A	S/D CRD Hydraulic System MOVs	B
12E-2484	S/D Iso Cond System MOVs	S
12E-2502, Sheet 1	S/D PCIS Switch Development, Reset Circuit, TIP Isolation, Recirculation Loop Interlock, Sheet 2	AM

**DRAWINGS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
12E-2502, Sheet 2	S/D PCIS Switch Development, Reset Circuit, TIP Isolation, Recirculation Loop Interlock	AF
12E-2502A	S/D PCIS Reset Circuit	H
12E-2506, Sheet 1	S/D PCIS Iso Cond Control Logic	AP
12E-2506, Sheet 2	S/D PCIS Iso Cond Control Logic	AN
12E-2506, Sheet 3	S/D PCIS Iso Cond Control Logic	AM
12E-2507	S/D PCIS Iso Cond - Outboard MOV 1301-3 Control	AL
12E-2507A	S/D PCIS MOV 1301-2 Control	T
12E-2507B	S/D Iso Cond RX Inlet Vlv 2-1301-1 and 2-1301-4	N
12E-2575BF	S/D CR Annunciator Panel 902-7 Part 1 of 5	C
12E-2575BM	S/D CR Annunciator Panel 902-8 Part 2 of 6	K
12E-2645C	Front View and W/D Synch Relay Cabinet DG 2 and 2/3	C
12E-2647A	Front Elevation and W/D DG 2/3 Neutral Grd Comp	C
12E-2649A	W/D Standby DG 2/3 Relay and Meter Panel 2223-33	AH
12E-2649D	Annunciator B Schematic, Wiring, and Window Display	R
12E-2653A	W/D 4160V SWGR Bus 23 Cubicle 1, 2, 3, 4, 5, and 6	AG
12E-2653B	W/D 4160V SWGR Bus 23 Cubicle 7, 8, 9, 10, 11, 12, and 13	AC
12E-2655B	W/D 4160V SWGR Bus 23-1 Cubicle 9, 10, 11, 12, and 13	AV
12E-2656H	Internal Schematic and Device Location Diagram 4160V SWGR Bus 24-1 Cubicle 13	K
12E-2664E	Wiring and S/D 480V Turb Bldg MCC 25-2 Part 5	M
12E-2674D	Wiring and S/D 480V RX Bldg MCC 28-1 (2-7828-1)	AB
12E-2674E	Wiring and S/D 480V RX Bldg MCC 28-1 (2-7828-1)	AI
12E-2676B	Wiring and S/D 480V Turb Bldg MCC 28-3 Part 2	AD
12E-2679C	Wiring and S/D 480V RX Bldg MCC 29-3 Part 3	O
12E-2684A	Wiring and S/D RX Bldg 250Vdc MCC 2A Part 1	O
12E-2684C	W/D RX Bldg 250Vdc MCC 2A Part 3	AC
12E-2684G	W/D Internals - RX Bldg 250Vdc MCC 2A and 2B	U
12E-2695	W/D MCB Panel 902-3 MSIP Iso Cond	DZ
12E-2696	W/D MCB Panel 902-3 MSIP Iso Cond	BT
12E-2697	W/D MCB Panel 902-3 CS - LPCI/CONT	CJ
12E-2698	W/D MCB Panel 902-3 CS - LPCI/CONT	AQ
12E-2704	W/D MCB Panel 902-3	J
12E-2732	W/D MCB Panel 902-7, Part 5 Term Blocks E, F, G, and H	T
12E-2736	W/D MCB Panel 902-8 Part 1 - Front Face	AN
12E-2741	W/D MCB Panel 902-8 Term Blocks G thru K Part 6	AV
12E-2752B	W/D Panel 902-20 Part 2	N
12E-2757D	W/D AEER Panel 902-32	AZ
12E-2769A	W/D Instr Rack 2202-5 Section A RX Instr and Prot	AC
12E-2770A	W/D RX Instr and Prot Local Rack 2202-6 Section A	AF

**DRAWINGS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
12E-2788	W/D Instr Rack 2202-28 L/D Monitoring	U
12E-2816B	W/D Low Pen Power Pen X-200B	Y
12E-2816F	W/D Low Voltage Power Pen X-205E	AG
12E-2816G	W/D Limit Switch and Solenoid Valves in Drywell	E
12E-2901P	Cable Tabulation Cables 20650 to 20699	AE
12E-2903B	Cable Tabulation Cables 22450 to 22499	AA
12E-2903D	Cable Tabulation Cables 22550 to 22599	AC
12E-2903H	Cable Tabulation Cables 22750 to 22799	AC
12E-2903J	Cable Tabulation Cables 22800 to 22849	AL
12E-2903K	Cable Tabulation Cables 22850 to 22899	AF
12E-2904D	Cable Tabulation Cables 23750 to 23799	W
12E-2904J	Cable Tabulation Cables 24000 to 24049	W
12E-2904K	Cable Tabulation Cables 24050 to 24099	Z
12E-2904L	Cable Tabulation Cables 24100 to 24149	R
12E-2904Q	Cable Tabulation Cables 24300 to 24349	U
12E-2906F	Cable Tabulation Cables 26250 to 26299	AA
12E-2908W	Cable Tabulation Cables 29400 to 29449	V
12E-3054	4kV SWGR RX and Turb Bldg	BX
12E-3301, Sheet 1	Single Line Diagram	AJ
12E-3301, Sheet 2	Single Line Diagram	AK
12E-3301, Sheet 3	Single Line Diagram	AJ
12E-3302A	Station K/D 4160V and 480V SWGRs 480V MCCs	U
12E-3305	K/D Turb Bldg 480V SWGR 35, 36, and 37	BC
12E-3311	K/D Turb Bldg 480V MCC 38-2 and 39-2	AT
12E-3321	K/D 250Vdc MCC	AE
12E-3322	K/D 125Vdc Dist	AF
12E-3322A	K/D Turb Bldg 125Vdc Main Bus Dist Panels	V
12E-3391	S/D SW Pumps	K
12E-3416	S/D CRD Hydraulic Pumps 302-3A and 302-3B	U
12E-3416A	S/D CRD Hydraulic System MOVs	C
12E-3430, Sheet 1	S/D CS System 1	AW
12E-3484	S/D Iso Cond System MOVs	R
12E-3501, Sheet 3	S/D PCIS Sensor and Trip Logic	AC
12E-3502, Sheet 1	S/D PCIS Switch Development, Reset Circuit TIP Isolation Recirculation Loop Interlock	AE
12E-3502A	S/D PCI (Drywell) System Reset Circuit System	K
12E-3506, Sheet 1	S/D PCIS Iso Cond Control Logic	AF
12E-3506, Sheet 2	S/D PCIS Iso Cond Control Logic	AG
12E-3506, Sheet 3	S/D PCIS Iso Cond Control Logic Sheet 6	AB
12E-3507	S/D PCIS Iso Cond Valve - Outboard MOV 1301-3	AD
12E-3507A	S/D PCIS MOV 1301-2 Control	U
12E-3507B	S/D Iso Cond RX Inlet Vlv 3-1301-1 and 3-1301-4	M
12E-3575AB	S/D CR Annunciator Panel 903-3 Part 1	H



**DRAWINGS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
12E-3653A	W/D 4160V SWGR Bus 33 Cub 1, 2, 3, 4, 5, 6, 7, and 8	U
12E-3664E	Wiring and S/D Turb Bldg 480V MCC 35-2 Part 5	H
12E-3674B	Wiring and S/D RX Bldg 480Vac MCC 38-1 Part 2	AA
12E-3674D	Wiring and S/D RX Bldg 480Vac MCC 38-1 Part 4	AE
12E-3679C	Wiring and S/D RX Bldg 480Vac MCC 39-3 Part 3	I
12E-3681A	Internal W/D 480V MCC Part 1	V
12E-3684A	W/D RX Bldg 250Vdc MCC 3A Part 1	M
12E-3684C	W/D RX Bldg 250Vdc MCC 3A Part 3	Y
12E-3695	W/D MCB Panel 903-3 MSIP Iso Cond 2	DU
12E-3697	W/D MCB Panel 903-3 LPCI CCS 2, CS and Iso Cond 2	CB
12E-3769A	W/D RX Instr and Prot Instr Rack 2203-5 Sect A	X
12E-3770A	W/D RX Instr and Prot Instr Rack 2203-6 Sect A	Z
12E-3788	W/D Instr Rack 2203-28 L/D Monitoring Sect A and B	L
12E-3816B	W/D Low Voltage Power Pen X-204S	AD
12E-3816F	W/D Low Voltage Power Pen X-204M	AK
12E-3901P	Cable Tabulation Cables 30650 to 30699	AB
12E-3903B	Cable Tabulation Cables 32450 to 32499	AA
12E-3903D	Cable Tabulation Cables 32550 to 32599	Y
12E-3903H	Cable Tabulation Cables 32750 to 32799	AB
12E-3903J	Cable Tabulation Cables 32800 to 32849	AG
12E-3904D	Cable Tabulation Cables 33750 to 33799	W
12E-3904J	Cable Tabulation Cables 34000 to 34049	U
12E-3904K	Cable Tabulation Cables 34050 to 34099	Y
12E-3904L	Cable Tabulation Cables 34100 to 34149	U
12E-3906F	Cable Tabulation Cables 36250 to 36299	Y
12E-3908W	Cable Tabulation Cables 39400 to 39449	R
12E-6400B	S/D MOVs Limit Switch Development	C
12E-6400C	MOV Limit Switch Development	G
12E-6401B	Internal/External W/D MOVs Limit Switch	B
12E-6401C	Internal/External W/D MOVs Limit Switch	F
12E-6505B	Cable Tabulation Cables 67250 to 67299	W
12E-6504D	Cable Tabulation Cables 66150 to 66199	AC
12E-6505H	Cable Tabulation Cables 67550 to 67599	Q
12E-6506N	Cable Tabulation Cables 69000 to 69049	S
12E-6506W	Cable Tabulation Cables 69400 to 69449	L
12E-6507H	Cable Tabulation Cables 69950 to 69999	K
12E-6614A	W/D Iso Cond RX Inlet Vlv 2-1301-1 and 4 XFR Panel	E
12E-6614B	W/D Iso Cond RX Inlet Vlv 2-1301-1 and 4 XFR Panel	H
12E-6615	W/D Iso Cond RX Inlet Vlv 2-1301-1 and 4 Control Panel	C
12E-7400A	MOVs Limit Switch Development	L
12E-7400C	MOV Limit Switch Development	E

**DRAWINGS**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
12E-7401A	Internal/External W/D MOVs Limit Switch	H
12E-7401B	Internal/External W/D MOVs Limit Switch	E
12E-7503S	Cable Tabulation Cables 75600 to 75649	Y
12E-7504B	Cable Tabulation Cables 76050 to 76099	AV
12E-7504D	Cable Tabulation Cables 76150 to 76199	AD
12E-7505K	Cable Tabulation Cables 77650 to 77699	Q
12E-7506W	Cable Tabulation Cables 79400 to 79449	H
12E-7507C	Cable Tabulation Cables 79700 to 79749	G
12E-7614A	W/D Iso Cond RX Inlet Vlv 3-1301-1 and 4 XFR Panel	E
12E-7614B	W/D Iso Cond RX Inlet Vlv 3-1301-1 and 4 XFR Panel	K
12E-7615	W/D Iso Cond RX Inlet Vlv 3-1301-1 and 4 Control Panel	E
12E-8501B	Cable Tabulation Cables 80050 to 80099	H

**FIRE PROTECTION IMPAIRMENT PERMITS**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
03-154	HPCI Rm Fire Door Inoperable	December 11, 2003
04-026	U2 HPCI Rm Door Open with Hoses	March 15, 2004
04-098	Door 39 (U3 HPCI Rm to East LPCI Rm) Will Be Blocked Open with a Clean Demin Hose Running thru	September 29, 2004
04-100	HPCI Door to LPCI Door 38 Run Hose to Sump	October 1, 2004

**PRE-FIRE PLANS**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
U2RB-12	Fire Zone 1.1.2.3.A (EI 589'-0")	5

**PROCEDURES**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
DAP-01-11	In-Plant Communication Systems	5
DFPS 4123-08	Fire Water System Flow Test	8
DFPS 4183-04	Unit 2 Heat/Smoke Detector Operability Test	15
DFPS 4183-05	Unit 3 Heat/Smoke Detector Operability Test	14
DOS 7900-02	Emergency Lighting Battery Pack Quarterly Inspection	2
DSSP 0010-01	Determining SSD Paths For Extensive Plant Damage	08
DSSP 0100-14	Safe SD Equipment Inspection	22
DSSP 0100-A1	HSD Procedure - Path A1	25
DSSP 0100-B1	HSD Procedure - Path B1	26
DSSP 0200-L	LPCI/CCSW CSD Method	11
DSSP 0200-S	SDC CSD Method	11
DSSP 0200-T1	Supplying Temp 125Vdc Power to ERVs	7
DSSP 0200-T6	Temp 4kV FD Connections - SDC, LPCI, RBCCW, and CCSW	7

**PROCEDURES**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
DSSP 0200-T9	Cable Connections for Monitoring RPV Water, Shell, and Flange Temperature Locally	5
OP-AA-201-009	Control of TC Material	4
OP-MW-201-007	FP System Impairment Control	3
SA-AA-122	Handling and Storage of Compressed Gas Cylinders/ Portable Tanks and Cryogenic Containers/Dewars	2

**REFERENCES**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
-----	Dresden Station FP Self-Assessment Report	April 2, 2002
-----	Post-Fire SD Capability (Preparation for NRC Inspection)	January 18 thru February 11, 2005
ComEd Letter	Dresden Station Unit 3 ADS Cable Modification	September 16, 1988
Figure 3.1-1	Unit 3 Iso Cond System Sketch (Sheet 2 of 2)	Amendment 12
NFPA 13	Standard for the Installation of Sprinkler Systems	1976
NFPA 72E	Standard on Automatic Fire Detectors	1974
NO-AA-10	Quality Assurance Topical Report	75
NOSA-DRE-03-10	NOS FP Audit Report	July 7, 2003
NRC SER	Compliance with 10 CFR 50, App R, Items III.G.3 and III.L and Exemption Request for HSD Dresden Repairs	July 6, 1989
TRM 3.7	Plant Systems	0

**VENDOR DOCUMENTS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
-----	Evaluation of Standard for Portable Fire Extinguishers	April 24, 1985
NTSC 93-124	NFPA Code Matrices	1

**WORK REQUESTS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
W/O 00065738	Low Air Pressure Trouble Light Lit	September 21, 2002
W/O 00109848	Dessicant in Air Compressor Needs Changed. It's Pink	August 25, 2003
W/O 00754170	D2/3 QTR TSTR Safe SD Equipment Inspection	February 3, 2005
W/O 00765695	Replace Smoke Detector Above SDC Pump	December 20, 2004
W/O 00768228	Smoke Detector Did Not Respond to Testing	December 30, 2004

## LIST OF ACRONYMS USED

AC or ac	Alternating Current
ADAMS	Agency-Wide Document Access and Management System
ADS	Automatic Depressurization System
AEER	Auxiliary Electrical Equipment Room
C/R and F/Ss	Cable Routing and Fire Stops
CCS	Containment Cooling System
CFR	Code of Federal Regulations
CR	Control Room
CRD	Control Rod Drive
CS	Core Spray
CSD	Cold Shutdown
DC or dc	Direct Current
DG	Diesel Generator
DMP	Dresden Maintenance Procedure
DNPS	Dresden Nuclear Power Station
DOA	Dresden Operating Abnormal
DPR	Demonstration Power Reactor
DRS	Division of Reactor Safety
DSSP	Dresden Safe Shutdown Procedure
EA	Equipment Attendant
ECCS	Emergency Core Cooling System
ERVs	Electromatic Relief Valves
FD	Feed
FHA	Fire Hazard Analysis
FP	Fire Protection
FPP	Fire Protection Program
FS	Fire Suppression
HPCI	High Pressure Coolant Injection
HSD	Hot Shutdown
HVAC	Heating, Ventilation and Air Conditioning System
HX	Heat Exchanger
IMC	Inspection Manual Chapter
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report or Issue Report
K/D	Key Diagram
L/D	Leak Detection
LPCI	Low Pressure Coolant Injection
MCB	Main Control Board
MCC	Motor Control Center
MO or MOV	Motor Operated Valve
MSIP	Main Steam Isolation, Pressure Suppression
NCV	Non-Cited Violation

## LIST OF ACRONYMS USED

NFPA	National Fire Protection Association
NOS	Nuclear Oversight
NRC	U. S. Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
NUREG	NRC Technical Report Designation
OCA	Owner Controlled Area
OPS	Operations
PA	Public Address
PARS	Publically Available Records System
PCIS	Primary Containment Isolation System
QAP	Quality Assurance Program
QATR	Quality Assurance Topical Report
RBCCW	Reactor Building Closed Cooling Water System
RIS	Regulatory Issue Summary
S/D	Schematic Diagram
SCBA	Self-Contained Breathing Apparatus
SD	Shutdown
SDC	Shutdown Cooling
SDP	Significance Determination Process
SER	Safety Evaluation Report
SSA	Safe Shutdown Analysis
SSCs	Structures, Systems, and Components
SSD	Safe Shutdown
SSEL	Safe Shutdown Equipment List
SW	Service Water
SWGR	Switchgear
TBCCW	Turbine Building Closed Cooling Water System
TC	Transient Combustible
TIP	Traverse Incore Probe
TRM	Technical Requirements Manual
URI	Unresolved Item
V or v	Volt
W/D	Wiring Diagram
W/O	Work Order
WO	Waste Oil
XFR	Transfer